

REMARKS

The Office Action and the cited and applied references have been carefully reviewed. No claim is allowed. Claims 11, 15-16, 18-21, and 32 presently appear in this application and define patentable subject matter warranting their allowance. Reconsideration and allowance are hereby respectfully solicited.

Claims 11-16, 18-19 and 32 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for the recitation of "grown-up". This rejection is respectfully traversed.

Claim 11 is now amended to clarify and positively recite that the grown-up transgenic plant "is in a stage that is edible as a feed for mammals or edible as a vegetable or fruited plant for humans". Support for this recitation is found in the specification, paragraph bridging pages 12 and 13, paragraph bridging pages 14 and 15, and in Examples 1-5. Applicants believe that the amendment to claim 11 overcomes this rejection.

Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Claims 11-16, 18-20 and 32 have been rejected under 35 U.S.C. §102(b) as being anticipated by Goodman et al., U.S. Patent 4,956,282. The examiner states that applicants' previous traversal of this rejection is unpersuasive because applicants' method steps are identical to those of Goodman, and applicants'

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starting materials are held to also be identical to Goodman's.

This rejection is respectfully traversed.

Claim 11 is now amended to define a grown-up transgenic plant as one "which is in a stage being edible as a feed for mammals or edible as a vegetable or fruited plant for humans". Due to this amendment, the "tobacco plant" specifically disclosed in Goodman is now certainly excluded from the scope of claim 11. Furthermore, the term "cytokine" has been replaced by "human interferon- α ", as supported in the specification at page 4, lines 6-14, and Examples 1 to 3.

In addition, the amount of human interferon- α recited in claim 11 is now amended between 0.1 microgram and one milligram. Support for this recitation is found in the specification at page 12, lines 15-24.

Goodman certainly does not specifically disclose a grown-up transgenic plant with such features and thus the presently claimed invention is not anticipated by Goodman.

A Declaration executed by Dr. Shigeharu FUKUDA is attached hereto. In the Declaration, Dr. Fukuda has compared the amounts of human interferon- α produced in various transgenic plants as encompassed by claim 11 which were transformed according to the method disclosed in Example 1 of the present specification and produced in a transgenic tobacco plant disclosed in Goodman. Please note that a transgenic tobacco

plant for testing was grown-up to form a tobacco plant body, whereas Goodman only discloses a transgenic tobacco plant grown to the callus stage. In conclusion to the results presented in the Declaration, Dr. Fukuda states as follows:

As evident from the above Experimental results, human interferon-alpha, i.e., interferon-alpha 2 and interferon-alpha 2 and interferon-alpha 8 were expressed in the transgenic spinach plant, celery plant, cabbage plant, and potato plant according to the present invention in a yield of about 150-folds higher than those in transgenic tobacco plants. This indicates that the transgenic plants according to the present invention are superior to transgenic tobacco plants in expression level when expressing human interferon-alpha in grown up plant bodies.

Therefore, the presently claimed transgenic plant has a much superior level of expression (i.e., of human interferon- α when compared to the transgenic tobacco plant of Goodman.

Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Claims 11-16, 18-21 and 32 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Goodman in view of Goddign et al., *Plant Physiol.* 113:181-190 (1997). This rejection is respectfully traversed.

As discussed above in the anticipation rejection over Goodman, Goodman does not disclose or teach a grown-up transgenic plant as presently claimed, such as a grown-up transgenic plant

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which expresses human interferon- α in a much higher yield than a transgenic tobacco plant disclosed in Goodman.

The newly cited Goddign reference only discloses a method to enhance trehalose accumulation in transgenic plants. Not only does Goddign not satisfy the deficiencies in Goodman as discussed above in the anticipation rejection but Goodign does not disclose the addition of trehalose to an isolated tissue as recited in claim 19. Accordingly, Goodman and Goddign cannot make obvious the presently claimed invention.

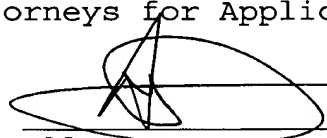
Reconsideration and withdrawal of the rejection are therefore respectfully requested.

In view of the above, the claims comply with 35 U.S.C. §112 and define patentable subject matter warranting their allowance. Favorable consideration and early allowance are earnestly urged.

Respectfully submitted,

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